

Claims

- [c1] 1. A memory card, comprising:
a memory part, a control device, and an I/O port,
wherein an interface of the I/O port can be a USB interface, a plurality of connection terminals of the interface are exposed, the connection terminals are implemented on the memory card, the I/O port of the memory card can communicate with an electronic device, into which the memory card is plugged, for information communication.
- [c2] 2. The memory card of claim 1, wherein an outer appearance of the memory card can be plugged into a slot for one selected from the group consisting of an IC card, a CF card, a SIM card, a SD card, a XD picture card, a memory stick duo card, a memory stick card, a multimedia card, a MG memory stick card, a smart media card, a Microdrive card, a PCMCIA card, a ATA flash card, and a USB silicon disk.
- [c3] 3. The memory card of claim 1, wherein the I/O port can be directly connected to a computer system for information communication.
- [c4] 4. A mobile electronic device, comprising:
a control device and at least one I/O port,
wherein the least one I/O port can be a USB interface, a plurality of connection terminals of the interface are exposed, the connection terminals are implemented on the mobile electronic device, the I/O port of the mobile electronic device can be connected to an electronic device for information communication.
- [c5] 5. An electronic device, comprising:
an I/O port A, capable of connection an I/O port B of a memory card by contact a plurality of connection terminals for information communication,
wherein the electronic device has a detection function to select one of multiple different communication protocols, which includes USB communication protocol, for connecting to the I/O port A on a memory card with USB communication protocol and information communication.

- [c6] 6. The electronic device of claim 5, wherein the electronic device further includes a detection function to select proper one of at least one of the different communication protocols, which includes USB communication protocol, for connecting to the I/O port A on one memory card of various memory cards in different communication protocols and information communication.
- [c7] 7. A connection architecture between an electronic device and a memory card with a USB interface, comprising:
a connector;
a slot, having a connector with the USB interface; and
a structure member, used to adapt installation and connection for the memory card with the USB interface, wherein the memory card with the USB interface can be plugged inside of the electronic device slot for connecting with a USB connector and information communication, wherein optionally the connector with the USB interface of the electronic device is limited to only connect to the memory card with the USB interface.
- [c8] 8. A memory card, comprising:
a memory part for storing information;
a control device, having at least two USB interface, used to control information communication, wherein the control device can optionally be integrated into the memory part; and
a dual connector, having at least two connection sides for connecting the at least two USB interfaces,
wherein the memory card uses a USB interface to connect an electronic device for information communication,
another USB connection side of the memory card connects an electronic device, into which the memory card is mounted, for information communication.
- [c9] 9. The memory card of claim 8, wherein an outer appearance of the memory card can be plugged into a slot for one selected from the group consisting of an IC card, a SIM card, a CF card, a SD card, a XD picture card, a memory stick duo card, a memory stick card, a multimedia card, a MG memory stick card, a smart media card, a Microdrive card, a PCMCIA card, and a USB silicon disk.

- [c10] 10. A memory card, comprising:
a memory part for storing information;
a control device, having only one USB interface, used to control information communication, wherein the control device can optionally be integrated into the memory part; and
a dual connector, having at least two connection sides for connecting the USB interface,
wherein the memory card uses a USB interface to connect an electronic device for information communication,
another USB connection side of the memory card connects an electronic device, into which the memory card is mounted, for information communication.
- [c11] 11. The memory card of claim 10, wherein an outer appearance of the memory card can be plugged into a slot for one selected from the group consisting of an IC card, a CF card, a SIM card, a SD card, a XD picture card, a memory stick duo card, a memory stick card, a multimedia card, a MG memory stick card, a smart media card, a Microdrive card, a PCMCIA card, and a USB silicon disk.
- [c12] 12. A memory card converter, comprising:
an I/O port A, capable of connecting to an I/O port B of a slot of a memory card for then connecting to an electronic device, wherein the memory card includes one selected from one of the group consisting of an IC card, a CF card, a SD card, a XD picture card, a memory stick duo card, a memory stick card, a multimedia card, a MG memory stick card, a smart media card, a Microdrive card, and a PCMCIA card;
a USB I/O port C, capable of connecting with a memory card A with USB interface to form as a memory card B; and
a control unit, implemented on the memory card converter, for converting an interfacing signal of the I/O port A into a USB signal for the USB I/O port C, an outer appearance of the memory card B can be inserted/released from an electronic device with a slot for a memory card C, wherein the memory card C selected from one of the group consisting of an IC card, a CF card, a SD card, a XD picture card, a memory stick duo card, a memory stick card, a multimedia card, a MG memory stick card, a smart media card, a Microdrive card, and a

PCMCIA card.

- [c13] 13. A memory card A, comprising:
a memory part and a connector with USB interface, capable of connecting a connector with of an external connection converter, so as to form a memory card B;
wherein the connection converter comprises a connector with USB interface, another connector, and optionally with a control unit; and the memory card B uses the another connector to connect to a connector, which is installed on an electronic device, so as to provide access function to the memory part.
- [c14] 14. The memory card A of claim 13, wherein an outer appearance of the memory card B can be plugged/unplugged from a slot of a memory card C, which is one selected from the group consisting of an IC card, a CF card, a SD card, a XD picture card, a memory stick duo card, a memory stick card, a multimedia card, a MG memory stick card, a smart media card, a Microdrive card, and a PCMCIA card, the memory card B takes place of the memory card C.
- [c15] 15. The memory card A of claim 13, wherein when the memory card A and the memory card B are connected, the memory card A includes a USB interface for connecting a USB connector of an external electronic device, to provide access function to the memory part.
- [c16] 16. The memory card A of claim 13, wherein when the memory card A and the memory card B are not connected, the independent memory card A can be connected to a USB interface for connecting a USB connector of an external electronic device, to provide access function to the memory part.
- [c17] 17. A memory card, comprising:
a memory part, used to store an information;
a control device, used to control information communication, wherein the control device can optionally be integrated into the memory part, and have a first I/O port for connecting to the memory card inserted external device second I/O port for information communication; and
a plug, which can be extending out or retracting back, for connecting to a

connector;
and a second USB interface I/O port;
wherein the memory card second USB interface I/O port, through the plug
connect to an I/O port of an external electronic device for information
communication.

- [c18] 18. A plug, used to connect with an IEEE 1394 "Mini" receptacle, wherein the receptacle has an outer frame and a first holder, wherein a plurality of metal connection terminals are implemented on the first holder, the plug comprising:
a plurality of metal connection terminals being exposed, used to
correspondingly connect to metal connection terminals of the receptacle when
the plug is electrically connected to the metal connection terminals of the
receptacle; and
a second holder, used to hold the metal connection terminals of the plug,
wherein the second holder optionally includes a frame.

- [c19] 19. An electronic apparatus, comprising:
an I/O port A, capable of connecting to an I/O port B of a memory card and a
plurality of connection terminals on the I/O port for information
communication,
wherein The electronic device has a detection function by a detection switch,
memory card has a structure member to trigger the detection switch when
connection, whereby one of various communication protocols in the electronic
device can be selected, and a connection to the I/O port A of the different
memory card for information communication.

- [c20] 20. An electronic device, comprising:
an I/O port A, capable of connecting with an I/O port B of a memory card, which
is inserted inside of an electronic device, and a plurality of connection terminals
on the I/O port for information communication,
wherein the electronic device has a detection connecting terminal, having a
detection function, for detecting an electronic signal on the connection terminal
of the memory card, so as to select one of various different communication
protocols, which includes a USB communication protocol, and have information

communication with a memory card having the USB interface and being lugged into the I/O port A, wherein when connected, one terminal on the memory card with the USB interface is contacting with the detection terminals of the electronic device, wherein optionally the one connection terminal of the memory card can be one terminal in the I/O port B.

- [c21] 21. The electronic device of claim 20, wherein the electronic signal comprises one selected from the group consisting of a voltage level detection, a electric conduction detection, a impedance detection, and a predetermined specific signal detection.
- [c22] 22. A plug, used to connect with a USB Series receptacle, wherein the receptacle has an outer frame including at least one elastic plates located at inner side of the outer frame, and a first holder, wherein a plurality of metal connection terminals are implemented on the first holder, the plug comprising:
a plurality of metal connection terminals being exposed, used to correspondingly contact the metal connection terminals of the receptacle when the plug is electrically connected to the metal connection terminals of the receptacle; and
a second holder, used to hold the metal connection terminals of the plug, wherein the second holder optionally includes a frame.
- [c23] 23. The plug of claim 22, wherein a first space is formed between the inner side of the outer frame and a first surface of the first holder, the plug with a metal frame, as well as an edge of the metal frame is inserted into the first space when the plug and the receptacle are connected.
- [c24] 24. The plug of claim 22, the plug with a metal frame, wherein the metal frame has an opening, which is located at a position with respect to a power terminal of the receptacle when the plug is connected in reverse to the receptacle.
- [c25] 25. A plug, used to connect with a USB series A receptacle, wherein the receptacle has an outer frame including at least four elastic plates located at inner side of the outer frame, and a first holder, wherein a plurality of metal connection terminals are implemented on the first holder, the plug comprising:

a plurality of metal connection terminals, used to correspondingly electrically connect to the metal connection terminals of the receptacle when the plug is electrically connected to the metal connection terminals of the receptacle; and a second holder, used to hold the metal connection terminals of the plug; and an outer frame, used to insert into the outer frame of the receptacle; wherein the second holder has a reduced thickness, wherein a thickness of the plug is less than about 0.38 cm.

[c26] 26. The plug of claim 25, wherein the outer frame is a metal frame and has an opening, which is located at a position with respect to a power terminal of the receptacle when the plug is connected in reverse to the receptacle.

[c27] 27. A memory card converter, comprising:
an I/O port A, capable of connecting to an I/O port B of a slot of a memory card for then connecting to an electronic device; and
a USB I/O port C, capable of connecting with a memory card A with USB interface to form as a memory card B; and
a control unit, a USB Host, implemented on the memory card converter, for converting an interfacing signal of the I/O port A into a USB signal for the USB I/O port C, can optionally limit port C only can connect to a memory card with USB interface.